Response to First Office Action
Docket No. 011.0214.US.UTL

REMARKS

Claims 1-40 are pending and remain in the application. No new matter has been introduced.

The abstract stands objected and has accordingly been amended to delete
5   the title of the application appearing on the page. Withdrawal of the objection is respectfully requested.

Claims 1-8, 10-20, and 22-40 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,262,976, to McNamara ("McNamara"). Applicant traverses the rejection.

10   A claim is anticipated under 35 U.S.C. §102(e) only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. MPEP §2131. The McNamara reference fails to describe, either expressly or inherently, each and every claim element of, and therefore does not anticipate, Claims 1-8, 10-20, and 22-40.

15   The McNamara patent describes network flow optimization using traffic classes, including interior, interior-to-exterior, exterior-to-interior, and transitory classes (Abstract; Col. 11, lines 30-33). McNamara addresses the problem of providing higher levels of scalability in internetworking while eliminating the possibility of congestion at any particular link (Col. 6, lines 3-6).

20   Multidimensional routing algorithms, based on the traffic classes, are used to more evenly distribute network traffic in any given topology in a manner that minimizes the amount of information added by a protocol and avoids the problems presented by ubiquitous routing tables (Col. 6, line 65-Col. 7, line 5). Network nodes, including links, switches, and stations, are ordered, that is,

25   numbered, into a set of Network Elements (NEs) (Col. 6, lines 6-15). Each NE in the network is "ordered" based on a network "center," which is functionally determined by an NE's connectedness (Col. 6, lines 15-20). An assigned numeric address ("host number"), designated during ordering, specifies the "relative" location of each NE (Col. 6, lines 20-25). To effectuate data flow, topologically

30   static switching and mapping are used in place of currently used routing

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protocols, to thereby simplify identification of directionality and of flow (Col. 29-32) (emphasis added).

McNamara requires any device composing the network to have addressing controlled by the network (Col. 12, line 51-Col. 13, line 56; FIGURE 5). The
5   network must be ordered to determine traffic flow direction (Col. 12, lines 30-32). The numbering is ordered in a sequence that identifies the most connected interior routers by low numbers followed by the least connected interior routers and the exterior domain routers are identified by the highest numbers (Col. 13, lines 19-25). Traffic is then assigned to the four traffic classes, wherein interior-
10   to-exterior traffic is routed from the lowest numbered to higher numbered routers among the shortest path candidates and exterior-to-interior traffic is routed from the highest numbered to lower numbered routers among the shortest path candidates (column 13 lines 31-41). Thus, McNamara teaches *enumerating* all NEs, *ordering* the NEs, and *assigning numbers* to the NEs based upon their
15   ordering within the network.

In contrast, independent Claims 1 and 13 respectively define a system and method for dynamically identifying internal hosts in a heterogeneous computing environment with multiple subnetworks. Similarly, independent Claims 26 and 33 respectively define a system and method for classifying hosts in a
20   heterogeneous computing environment. The invention addresses the problem of dynamically classifying *unknown* hosts in a distributed computing environment by analyzing and classifying transient packet traffic based on direction of flow and source and destination addresses (Spec., page 3, lines 17-20). This problem is unrelated to providing scalability and eliminating congestion, per the teachings of
25   McNamara, which simply declares specific hosts to be internal hosts and which performs no dynamic host identification or classification. Rather, McNamara teaches classifying network traffic based on a pre-determined network topology with known internal hosts, whereas no such knowledge is assumed, per Claims 1, 13, 26, and 33, which define dynamically classifying a hitherto unknown
30   originating host or receiving host as an inside host with high confidence.

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More particularly, independent Claim 1 recites a classification module classifying an unknown originating host located at the source address of an outbound packet as an inside host with high confidence, classifying an unknown receiving host located at the destination address of an inbound packet as an inside

5   host, and reclassifying the unknown receiving host as an inside host with high confidence upon receiving a further outbound packet having a source address corresponding to the address of the unknown receiving host. Similarly, independent Claim 13 recites classifying an unknown originating host located at the source address of an outbound packet as an inside host with high confidence,

10   classifying an unknown receiving host located at the destination address of an inbound packet as an inside host, and reclassifying the unknown receiving host as an inside host with high confidence upon receiving a further outbound packet having a source address corresponding to the address of the unknown receiving host. Similarly, independent Claim 26 recites a traffic manager classifying the

15   hosts based on source address with each outbound packet originating from an *Unknown* state, *Outside* state or *Inside* state into an *Inside with High Confidence* state and classifying the hosts based on destination address with each inbound packet originating from an *Unknown* state or *Outside* state into an *Inside with High Confidence* state. Finally, independent Claim 33 recites classifying the

20   hosts based on source address with each outbound packet originating from an *Unknown* state, *Outside* state or *Inside* state into an *Inside with High Confidence* state, and classifying the hosts based on destination address with each inbound packet originating from an *Unknown* state or *Outside* state into an *Inside with High Confidence* state. Such limitations are neither taught nor suggested by

25   McNamara.

Accordingly, the McNamara reference fails to describe, either expressly or inherently, each and every claim element of, and therefore does not anticipate, independent Claims 1, 13, 26, and 33. Claims 2-8 and 10-12 are dependent on Claim 1 and are patentable for the above-stated reasons and as further

30   distinguished by the limitations recited therein. Claims 14-20 and 22-24 are

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dependent on Claim 13 and are patentable for the above-stated reasons and as

further distinguished by the limitations recited therein. Claim 25 is multiply

dependent on Claims 13, 14, 15, 16, 17, 18, 19, 20 and 21 and is patentable for the

above-stated reasons and as further distinguished by the limitations recited

5   therein. Claims 27-32 are dependent on Claim 26 and are patentable for the

above-stated reasons and as further distinguished by the limitations recited

therein. Claims 34-39 are dependent on Claim 33 and are patentable for the

above-stated reasons and as further distinguished by the limitations recited

therein. Claim 40 is multiply dependent on Claims 33, 34, 35, 36 and 37 and is

10   patentable for the above-stated reasons and as further distinguished by the

limitations recited therein. As anticipation has not been shown, withdrawal of the

rejection under 35 U.S.C. §102(e) is respectfully requested.

Claims 9, 21, 31 and 38 stand rejected under 35 U.S.C. §103(a) as being

obvious over McNamara and in view of the background art of the present U.S.

15   Patent Application, Serial No. 09/884,884 (Hankins). Applicant traverses the

rejection.

To establish a *prima facie* case of obviousness, the examiner has the

burden of proving that (1) there is some suggestion or motivation, either in the

references themselves or in the knowledge generally available to one of ordinary

20   skill in the art, to modify the reference or combine the reference teachings; (2)

there is a reasonable expectation of success; and (3) the combined references

teach or suggest all the claim limitations. MPEP § 2143.

First, there would be no suggestion or motivation to modify or combine

the references. McNamara teaches and suggests classifying network traffic based

25   on a pre-determined network topology with known internal hosts, whereas no

such knowledge is assumed, per Claims 9, 21, 31, and 32, which recite ignoring

packet traffic flow for each packet with an originating host or a receiving host

classified as an inside host with high confidence.

Second, one of ordinary skill in the art would have no reasonable

30   expectation of success. Obviousness may not be established by picking and

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choosing from an art reference only so much of the reference as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. *Bausch & Lomb, Inc. v. Barnes-Hind, Inc.,* 796 F.2d 443, 230 USPQ 416 (Fed. Cir. 1986).

5   McNamara teaches and suggests enumerating all NEs, ordering the NEs, and assigning numbers to the NEs based upon their ordering within the network. In contrast, Claims 9, 21, 31, and 32 define ignoring packet traffic flow based on a dynamic internal host classification. The static NE enumeration, ordering, and number assignment of McNamara fails to accommodate such dynamic behavior.

10   Finally, the combined references teach or suggest all the claim limitations, as argued above with respect to the rejection under 35 U.S.C. §102(e) for anticipation. Claim 9 is dependent on Claim 8 and is patentable for the above-stated reasons and as further distinguished by the limitations recited therein. Claim 21 is dependent on Claim 20 and is patentable for the above-stated reasons

15   and as further distinguished by the limitations recited therein. Claim 31 is dependent on Claim 26 and is patentable for the above-stated reasons and as further distinguished by the limitations recited therein. Claim 38 is dependent on Claim 33 and is patentable for the above-stated reasons and as further distinguished by the limitations recited therein. Accordingly, as a *prima facie*

20   case of obviousness has not been shown for Claims 9, 21, 31, and 38 , withdrawal of the rejection for obviousness under 35 U.S.C. §103(a) is requested.

The prior art made of record and not relied upon has been reviewed by the applicant and is considered to be no more pertinent than the prior art references already applied.
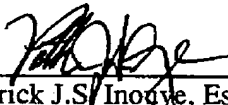
25   Examination and further consideration of the application is respectfully requested. Claims 1-40 are believed to be in a condition for allowance. Entry of the foregoing amendments is requested and a Notice of Allowance is earnestly solicited. Please contact the undersigned at (206) 381-3900 regarding any questions or concerns associated with the present matter.

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Respectfully submitted,

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